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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,940	07/29/2003	Charles Hartman	200310736-1	9039
22879 7590 12/26/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER DALEY, CHRISTOPHER ANTHONY	
			ART UNIT 2111	PAPER NUMBER
			NOTIFICATION DATE 12/26/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/629,940

Applicant(s)

HARTMAN ET AL.

Examiner

Christopher A. Daley

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 18 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 –4, 9-14, 16-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (US20030046499) in view of Ajanovic (US5859988).
4. As to claims 1, 11, and 16, Lin discloses a configurable I/O bus architecture, comprising:
a system bus interface device (Figure 4 illustrates a computer system comprising mass storage devices coupled directly and indirectly to the CPU interface);
first and second I/O bus interface devices (Figure 4 illustrates a system comprising of a CPU 401 coupled directly to a mass storage device via first bus, local bus, and a second mass storage device 204C, coupled to said processor thru switching device 201); first and second intermediate buses (Figure 4 illustrates local bus – first bus, coupling device 204B, and PCI bus – second bus coupling device 204C, page 4, paragraph 0043);
a switching device (Said device is bus controller 407, page 4, paragraph 0042);

the first intermediate bus couples the system bus interface device to the first I/O bus interface device (First I/O interface, external memory interface couples mass storage device 204B to system bus, page 4, paragraph 0043); the second intermediate bus directly couples the system bus interface device to the switching device (Figure 4 illustrates said coupling of second I/O interface, interface 405 to switching device, 407, page 4, paragraph 0042);

the switching device is operable to couple the second intermediate bus either to the first or to the second I/O bus interface device responsive to the steering signal (The bus control 407 afford such selection, page 4, paragraph 0042).

Lin does not explicitly disclose a steering signal.

However, Ajanovic teaches a steering signal (Figure 3 illustrates Arbitration and control unit 308 that produces a signal that determined the coupling of interface unit 301 to 302, COL. 5, line 65 – COL. 6, line 3. The arbitration scheme supplies a signal that indicates that target is ready, and enables the transmission of data buffer, COL. 8, lines 5 – 34. Said signal is a steering signal). It would have been obvious to one of ordinary skill in the art would have used the bridge of Ajanovic in the system of Lin to have expansion capability within the Lin system, COL. 2, lines 50 - 58. One of ordinary skill in the art would have been motivated to use the bridge of Ajanovic in the system of Lin to have expansion capability within the Lin system, COL. 2, lines 50-58.

5. As to claims 2, 12, and 17 Ajanovic discloses the configurable I/O bus architecture: further comprising at least a first signal indicating whether an I/O device is coupled to the second I/O bus interface device (Signal 206 is said signal, COL. 7, lines 40 - 45); and

wherein the steering signal is derived from the first signal such that the steering signal assumes a first state when the I/O device is so coupled and a second state when the I/O device is not so coupled (The steering signal arbitrates the enablement of either interface 302 or 303, COL. 7, lines 10 - 25).

6. As to claims 3, 13, and 18, Ajanovic discloses the configurable I/O bus architecture, wherein:

the switching device couples the second intermediate bus to the second I/O bus interface device when the steering signal assumes the first state, and couples the second intermediate bus to the first I/O bus interface device when the steering signal assumes the second state (The steering signal arbitrates the enablement of either interface 302 or 303, COL. 7, lines 10 - 25).

7. As to claims 4 and 14, Ajanovic discloses the configurable I/O bus architecture: further comprising a second signal indicating whether the I/O device is coupled to the second I/O bus interface device (Figure 3 illustrates control signal from arbiter 308 to second interface 303); and

wherein the steering signal is derived from both the first and second signals using a logic gate (It is well known in the art that the inputs of controlled elements are inputs into the arbitration logic).

8. As to claim 9, Ajanovic discloses the configurable I/O bus architecture: wherein the first and second intermediate buses are rope buses (Figure 2 illustrates an embodiment where a rope configuration is present, Col. 3, lines 28 - 63).

9. As to claim 10, Lin discloses The configurable I/O bus architecture, wherein: the switching device is operable to directly couple the second intermediate bus either to the first or to the second I/O bus interface device responsive to the steering signal (Figure 4 illustrates the direct coupling of external memory 403 interface or PCI interface 405, depending on the control of BUS/Bridge controller 407, page 4, paragraph 0042).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5 – 8, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ajanovic in view of Alexander et al (US6510529), hereinafter Alexander.

12. As to claim 5,7 – 8, and 15, Ajanovic does not disclose a hand-operated switch for an I/O bus;

However, Alexander teaches of a hand-operated switch 104 controlled by a panel button that will enable/disable the coupling of PCI bridge 108 to system controller 102. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Alexander into Ajanovic as Alexander's teaching provides a human safety over-ride, when a fault condition arises COL. 5, lines 43 – 67. One of ordinary skill in the art would have been motivated to use the bridge of Ajanovic in the system of Alexander to provide a manual safety override, when a fault occurs, COL. 5, lines 43 – 67.

13. As to claim 6, Ajanovic discloses the configurable I/O bus architecture, wherein: the switching device couples the second intermediate bus to the second I/O bus interface device when the steering signal assumes the first state, and couples the second intermediate bus to the first I/O bus interface device when the steering signal assumes the second state ((The steering signal arbitrates the enablement of either interface 302 or 303, COL. 7, lines 10 - 25).

Response to Arguments

14. Applicant's arguments filed 6/11/2007 have been fully considered but they are not persuasive. With regards to the applicant's claim that Lin does not teach a second intermediate bus directly couples the system bus interface device to the switching device. The examiner points to Figure 4 illustrates that provides a more detailed description over Figure 2. Figure 4 illustrates said coupling of second intermediate bus PCI coupling mass storage device 204c to switching device, 407, page 4, paragraph 0042. Therefore, applicant's argument is not considered persuasive.

Applicant argues that prior art does not teach the limitation of a switching device operable to couple the second intermediate bus to either the first or second I/O bus interface responsive to the steering signal. Figure 4 of Lin illustrates said coupling of second I/O interface, interface 405 to switching device, 407, page 4, paragraph 0042. Figure 7 illustrates an embodiment that illustrates the bridge being a switch of data to memory 704 and mass storage device 705, page 5, paragraph 0049. Thus applicant's argument is not considered persuasive towards patentability.

Applicant argues that prior art does not disclose a steering signal.

However, Ajanovic teaches a steering signal (Figure 3 illustrates Arbitration and control unit 308 that produces a signal that determined the coupling of interface unit 301 to 302, COL. 5, line 65 – COL. 6, line 3. The arbitration scheme supplies a signal that indicates that target is ready, and enables the transmission of data buffer, COL. 8, lines 5 – 34. Said signal is a steering signal). The rejection is therefore maintained.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Daley whose telephone number is 571 272 3625. The examiner can normally be reached on 9 am. - 4p m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571 272 3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher Daley
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